UNITED STATES DISTRICT COURT EASTERN DISTRICT OF NEW YORK

BARDHE RAMAJ,)	
Plaintiff,)	
v.)	Case No.: 19-CV-0284-ENV-LB
CONAGRA FOODS, INC., et al.,)	August 20, 2021
Defendants.)	
)	

MEMORANDUM IN SUPPORT OF DEFENDANT'S MOTION TO EXCLUDE THE TESTIMONY OF PLAINTIFF'S EXPERT LESTER HENDRICKSON, PH.D.

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INTRODUCTION

Plaintiff retained Dr. Lester Hendrickson to conduct a "failure analysis" relating to the PAM Original cooking spray product at issue in this case. Rather than do so, Dr. Hendrickson concluded that some "combination of defects" – the specifics of which are not defined, and not supported – "were the root cause of the explosion." Still, as he has in other cases, Dr. Hendrickson recognized that, "absent a manufacturing defect," Plaintiff's container of PAM cooking spray (the "Subject Can") "would have safely retained the explosive contents." As a result of this admission, and others, Dr. Hendrickson's opinions relating to the design of the product are inadmissible for the reasons set forth in *Urena v. ConAgra Foods, Inc.*, No. 16CV5556PKCLB, 2020 WL 3051558 (E.D.N.Y. June 8, 2020).

As for a purported manufacturing defect, Dr. Hendrickson offers two hypotheses. The first, which is that the metal used by the can's designer and manufacturer non-party DS Containers, Inc. ("DSC") to form the can's bottom was too thin, was disproven by the measurements taken by an independent laboratory in connection with destructive testing of the Subject Can. The second, which is that the can's bottom – after it is stretched during the formation by DSC – contains areas of thinness, is insufficient to establish a manufacturing defect because Dr. Hendrickson admits that this is true for *all* cans, meaning nothing was unique about DSC's manufacture of the Subject Can.

Finally, for the first time in Dr. Hendrickson's career, he has decided to offer an opinion on the adequacy of the product's warnings, a subject for which he admittedly has no education or experience. On the issue of the adequacy of the warnings, Dr. Hendrickson merely observes that, in his view, the warnings do not comport with a voluntary industry standard, a standard which he has never seen applied to cooking spray products.

For these reasons, and others set out here, Dr. Hendrickson's opinions should be excluded in their entirety under Federal Rule of Evidence 702 and *Daubert*.

FACTUAL BACKGROUND

I. CASE OVERVIEW

The facts of this case are set forth in detail in Conagra's contemporaneously filed statement of facts in support of summary judgment. Relevant to this motion, this case involves a container of PAM Original cooking spray (12 oz.) ("PAM cooking spray"), which was sold in a bottom-vented container (or "bottom-vented can") that was designed and manufactured by DSC. The bottom-vented can will buckle (or evert its bottom) when the contents exceed 180 PSI (pounds per square inch). The can includes a pressure relief mechanism such that when the can buckles, four U-shaped score lines on the can's bottom open (or "vent"), releasing the pressure and the can's contents. (Ex. 1, March 18, 2021 Deposition of Lester Hendrickson ("Hendrickson Dep.") 33:18-34:2.)¹

There is a thermodynamic equilibrium relationship between the temperature of the contents of PAM, and its pressure. As the temperature of the PAM cooking spray contents increases, the pressure inside the container increases. As the temperature of the contents decreases, the pressure inside the container decreases; and if the temperature remains the same, the pressure remains the same. (*Id.* at 27:9-28:22.)

Furthermore, this pressure-temperature relationship has been measured in several studies. As recognized by Dr. Hendrickson, for the contents of a can of PAM cooking spray to reach a pressure exceeding 180 PSI (i.e., the minimum designed buckle/vent pressure of the can), its contents must be heated to an average temperature exceeding 160°F. (Ex. 2, November 2, 2021

¹ All exhibits are attached to the Declaration of Emily A. Ambrose, filed herewith.

Failure Analysis of a Vented 12 Oz Container of PAM Original, Prepared by Lester E. Hendrickson ("Hendrickson Rep.") at 13.) Actual testing of an exemplar PAM container established it did not buckle or vent until the contents approached a temperature of approximately 194°-196°F. (Ex. 3, Excerpts of January 25, 2021 Expert Report of Sean J. Dee ("Dee Rep."), Appendix D, at D-9.) At 120°F (the maximum temperature at which the product should be stored according to its warnings), the expected pressure of the contents is 110 PSI to 120 PSI. (Ex. 1, Hendrickson Dep. 33:9-13.)

Dr. Hendrickson also agreed that the can will only buckle and vent if the pressure inside the can increases, or "when the pressure is – in the can is high enough to cause the bottom to evert, or to buckle, as they call." (*Id.* at 34:13-19.) Dr. Hendrickson also explained that you "would expect the can to buckle the first time the pressure reaches whatever pressure is required to cause the bottom of that can to buckle." (*Id.* at 36:4-13.)

Plaintiff's testimony is inconsistent with this science and with Dr. Hendrickson's express admissions. Plaintiff alleges that, on April 15, 2016, the Subject Can, which had been used up to "two times a day" without issue by Plaintiff (Ex. 4, Ramaj Dep. 26:7-23), spontaneously buckled and vented without exposure to *any* heat (*id.* at 35:23-36:1; 50:1-9). Specifically, Plaintiff testified she initially placed the Subject Can on her countertop, between the oven range and her refrigerator, after using it to spray a pan for baking chicken. (*Id.* at 42:3-23.) She does not recall whether it remained in that location, or whether she moved it. (*Id.* at 43:5-20.) A contemporaneous medical record indicates the Subject Can was "sitting on top of the stove" at the time of the incident, but in her deposition more than three years later, Plaintiff testified that she was "not sure" of the location, and that she did not remember whether she had moved the Subject Can before the incident. (*Id.* at 43:5-20; 97:9-16.) Plaintiff testified that she baked the chicken in the oven for 30-

35 minutes (*id.* at 43:1-4), then placed the pan of chicken on top of the stove to cool down. (*Id.* at 35:23-25; 36:1-2; 43:1-4; 45:16-23.) She also testified: "I turn off – I shut down everything on the stove." (*Id.* at 35:23-36:1.) She left the room to prepare the dining table. (*Id.* at 36:3-9; 45:1-23.) Later, she walked back into the kitchen and, "As soon as I walked into the kitchen, something exploded like a bomb and I felt like my house go down. I didn't know what happened." (*Id.* at 36:8-15; *see also* 48:19 ("As soon as I entered the kitchen, it exploded.").)

Plaintiff's experts, including Dr. Hendrickson, have assumed that the Subject Can remained on the countertop at the time of the incident, and that all heat sources were off. Based on those assumptions (which Conagra's experts disagree with), the Subject Can would not have been heated beyond the ambient temperature of the kitchen at the time of the incident. (Ex. 3, Dee Rep. 14 ("In the absence of a heat source, a can located on a kitchen counter is expected to have a temperature approximately equal to the ambient temperature of the kitchen.").)

Yet, none of Plaintiff's proffered experts, including Dr. Hendrickson, can explain why or how Plaintiff's PAM cooking spray could have first reached its buckling pressure/temperature at the time of the incident, where, under Plaintiff's testimony, there was <u>no</u> heat source that could have increased the pressure-temperature of the can at the time she walked back into the kitchen. (Ex. 1, Hendrickson Dep. 122:24-123:23 ("it's difficult to explain, but perhaps she didn't turn the oven off. I mean, we don't – she – she said she did. Maybe she thought she did. Maybe she didn't. We don't know."). Dr. Hendrickson also agreed that there is no evidence that would rule out the possibility that Plaintiff had the PAM container sitting on top of a heated stove at the time of the incident. (*Id.* at 121:5-16 ("I don't see any physical evidence that would rule that out"); 123:18-21 ("There's no reason why she – it's not reasonably foreseeable that if she had the oven on she wouldn't sit a can – can of PAM on top of the stove."); 119:20-120:4 ("In a hypothetical sense, I

mean, she could have had the can laying on the gas burner and turned it on, and -- and the can could have exploded and then she turned the burner off, and, you know, it could have -- she would have been burned the same way.").) As to the temperature of Plaintiff's container at the time of the incident, Dr. Hendrickson observed "I really don't know what the temperatures were." (*Id.* at 107:1-4; *see also* 108:13-20.)

II. DR. HENDRICKSON'S QUALIFICATIONS

Dr. Hendrickson's background is in the field of metallurgy, but he has very little experience specific to aerosol cans. In a similar case in which Dr. Hendrickson proffered virtually the same testimony regarding the same product, the court expressed:

serious doubts about whether Dr. Hendrickson has the appropriate credentials to opine on the matters at issue in this case. Of the "more than one thousand investigations in which he has participated since his retirement," approximately four hundred of which reached the deposition stage . . ., only seven involved analysis "substantially similar" to the issues involved in this case . . . While Dr. Hendrickson has never been excluded as an expert witness, he has also never been qualified as an expert in this area The Court does not credit Dr. Hendrickson's testimony that a general metallurgical engineering degree is sufficient to offer expertise on a myriad of designs, from canisters to designing a bridge. . . .

Urena, 2020 WL 3051558, at *9. While the *Urena* court recognized Dr. Hendrickson has "some knowledge and experience," of which it did not elaborate, the court ultimately excluded Dr. Hendrickson's opinions because – as here – they were inconsistent with the plaintiff's own testimony. *Id*.

III. DR. HENDRICKSON'S OPINIONS

Dr. Hendrickson's report was signed on November 2, 2020, and contains 22 numbered opinions. (Ex. 2, Hendrickson Rep. 12-16.) Dr. Hendrickson's Opinion 7 is that "a combination of defects were the root cause of the explosion under the circumstances that transpired in the event

that injured Ms. Ramaj." (Hendrickson Rep. 13.) This "combination" of defects is elaborated in Dr. Hendrickson's other opinions, and set forth below:

A. Manufacturing Defect Opinions

Dr. Hendrickson's Opinions 6, and 9-10 relate to an alleged manufacturing defect. In Opinion 6, Dr. Hendrickson says "that the PAM can that released its contents in the kitchen of Mrs. Ramaj did so due to premature opening of the vents at a temperature substantially less than 130 °F." (*Id.* at 13.) He attributes this to a "manufacturing defect" (Opinion 9), and further acknowledges:

It is my opinion that absent a manufacturing defect, which reduced the structural strength of the convex bottom of the subject "vented" can, and thereby reduced the 180 psig pressure and 160 °F temperature required to evert, or buckle the bottom, open the scores and release the contents of the can in less than one half second, the subject PAM can in the Ramaj incident would have safely retained the explosive contents.

(*Id.* (Opinion 10).) Dr. Hendrickson does not identify or explain what the manufacturing defect would be in any of his numbered opinions, but he explained in his deposition that he is offering two related theories: (i) that the metal used to form the can's bottom was too thin; or (ii) that the process of forming the can bottom caused areas of thinness. He then relies on a Finite Element Analysis (FEA) to conclude that areas of thinness (whether in the metal before the can bottom was formed, or after) may cause a can to buckle and vent below its designed pressure specification of 180 PSI.

(i) Metal Used to Form Can Bottom Too Thin

On page 10 of his report, Dr. Hendrickson explains:

The pressure required to evert the bottom, and vent the canister, is a sensitive function of the thickness of the metal *from which the bottom is manufactured*, as well as the modulus of elasticity of the particular steel. I have performed a Computer Aided Analysis that shows that a small variation in thickness can reduce

the stability of the concave bottom and appreciably lower the internal pressure required to cause the bottom to evert.

(*Id.* at 10 (emphasis added).) Dr. Hendrickson clarified at his deposition that the "Computer Aided Analysis" he was referring to is an FEA that he commissioned in connection with another matter. (Ex. 1, Hendrickson Dep. 92:13-93:23.) As recognized by Dr. Hendrickson, the FEA concludes that if the product is manufactured from steel that is within specification, it is not expected to begin buckling (or venting) until it reaches a pressure of at least 186 PSI. (Ex. 1, Hendrickson Dep. 95:23-96:7.) Unrebutted testing by Conagra's expert, Dr. Sarah Easley, establishes that "[t]he flat center disc . . . possess a thickness most representative of the as-manufactured thickness of the steel material from which the can bottoms are formed and for which the specification tolerances are defined." (Ex. 6, January 25, 2021 Report of Sarah K. Easley ("Easley Rep.") 9 (emphasis added); see also Appendix D; Ex. 1, Hendrickson Dep. 69:24-70:14 (agreeing with Dr. Easley's assessment on this point).) As set forth, infra at pp. 11-12, the direct measurements from the flat center disc of the Subject Can established that the thickness and strength of the steel from which the Subject Can's bottom was formed was within specification. (Ex. 6, Easley Rep. 19; Ex. 1, Hendrickson Dep. 70:11-14 (agreeing that the steel used to form the can bottom was within specification).) This testing, therefore, disproved Dr. Hendrickson's initial manufacturing-defect hypothesis that the steel used to form the can bottom was too thin.

(ii) Areas of Thinness Due to Can Forming

On page 10 of his report, Dr. Hendrickson observes:

Destructive tests done by in independent testing laboratory on a PAM Original spray cooking oil canister that is claimed to have vented and exploded while sitting on a counter adjacent to an ignited gas burner, had locations where the thickness of the bottom was less than that specified in the design and manufacture of the canister. Such evidence supports an opinion that this canister was defective in manufacture.

(Ex. 2, Hendrickson Rep. 10; Ex. 1, Hendrickson Dep. 70:15-24 ("when you form that flat sheet into a dome, you need to stretch the metal. And when you stretch it, the metal becomes thinner.").) But as acknowledged by Dr. Hendrickson, this thinning occurs in all cans manufactured by DS Containers, Inc. (Ex. 1, Hendrickson Dep. 70:15-24.) Dr. Hendrickson did not disclose any opinion based on the measurements taken on the Subject Can in this case. (*Id.* at 102:7-11 ("Q Okay. And did you do any analysis on the Ramaj data to see what the range of pressures that the data would suggest that the can could buckle under your FEA analysis? A No, because that data doesn't tell me anything.").) In addition, even if there are areas of thinness found, Dr. Hendrickson acknowledged that he does not "know whether thinness is varied from can to can" (*id.* at 76:2-6) or whether a given measurement is "thin enough to cause this can to vent" at a given temperature (*id.* at 77:16-23).

B. Design Defect Opinions

Dr. Hendrickson's Opinions 1-5, 8, 11-14, and 21 relate to an alleged design defect. Specifically, Opinions 1-2 criticize the use of bottom-vents, which in Dr. Hendrickson's opinion "have no useful function" and "no cost advantage." (Ex. 2, Hendrickson Rep. 12.) Opinions 5, 12, 13, and 14 recognize that the temperature to which the vents are currently "designed to open and allow the contents to escape is a minimum of 160 °F" whereas, an alternative, non-vented container with a burst pressure of 270 PSI would have "retained its contents when exposed to the same temperature conditions as the subject PAM Original container." (*Id.* at 13-15.) Such alternative containers, in Dr. Hendrickson's opinion, have "a greater degree of safety." (*Id.* at 15.) In Opinion 8, Dr. Hendrickson sums up these opinions:

It is my opinion that the primary defect is a design defect associated with the introduction of "U" shaped scores in the bottom of the can, which provide no useful function with respect to utility or performance of the product, and are unnecessary in that the same PAM spray cooking oil is, and has been marketed

and sold in the same, or substantially similar cans absent scores in the bottom with no reported incidents of venting, bursting or fire or personal injury from the nonvented design. This defect alone reduced the pressure at which the contents escape from the can from 270 psi or higher, to as low as 125 psi leaving the design with a factor of safety of less than one.

(*Id.* at 13-14.) Notably, Dr. Hendrickson clarified at his deposition that the "as low as 125" used in this opinion is not the design pressure of the container (which is a minimum of 180 PSI); it is the lowest pressure he believed could theoretically be associated with a venting *if* there is a manufacturing defect in the product. (*See* Ex. 1, Hendrickson Dep. 205:10-205:24 (recognizing 125 PSI is "a pressure in which -- with a manufacturing defect [the product] could fail.").)

In Opinion 11, which also relates to the canister itself, Dr. Hendrickson claimed that the "failure to specify a tolerance" for the thickness and strength of the metal "used for making the can bottom" constituted a design defect. (Ex. 2, Hendrickson Rep. 14.) Dr. Hendrickson conceded at his deposition that there are such tolerances, and that his conclusion that there was not was in error. (Ex. 1, Hendrickson Dep. 209:9-211:1 ("I think when I wrote this report I didn't have this information.").)

Opinions 15-16, again relating to the canister itself, relate to Dr. Hendrickson's belief that the existing design had no "factor of safety" to assure it would perform "safely as expected by a normal consumer, when used as intended or in a reasonably foreseeable manner." (*Id.* at 15.) Dr. Hendrickson conceded at his deposition, however, that he would consider normal use of the product to be under 90 °F, which he said corresponded to a pressure of 80 PSI, which means that the "factor of safety" for a PAM container designed to buckle and vent at 180 PSI is "greater than two." (Ex. 1, Hendrickson Dep. 207:13-209:6.) In other words, the can is twice as strong as needed to handle what he considers normal use. (*Id.*) Finally, Opinions 17-20 are that Special Permit DOT-

SP 1951 does not apply to PAM Original cooking spray and/or Conagra "violated" the Special Permit. (Ex. 2, Hendrickson Rep. 15-16.) These DOT-related opinions are irrelevant.

In addition to his opinions regarding DSC's container itself, Dr. Hendrickson also takes issue with the contents of the container. In Opinions 3-4, Dr. Hendrickson claims that there is also a "safety hazard" associated with the use of "highly flammable" propellant, which can escape when the container is "unintentionally heated." (*Id.* at 12-13.) And, although not included as a numbered opinion, Dr. Hendrickson's report also says, "It is my opinion that the subject PAM Original canister could have been made safe by using a non-flammable propellant instead of a liquefied petroleum gas propellant." (*Id.* at 6.) Dr. Hendrickson does not suggest any specific propellant, nor has he provided a specific alternative formulation. (Ex. 1, Hendrickson Dep. 142:8-17. ("That's not my area of specialty.").) Furthermore, Dr. Hendrickson acknowledged at his deposition that he has no educational background or experience relating to the formulation of cooking sprays or aerosol products. (*Id.* at 140:16-25 ("T'm not the expert in formulating those, no.").)

Notwithstanding all of these design-defect related opinions, Dr. Hendrickson opines, in Opinion 21, that "had the Pam containers been truly designed and manufactured to meet DOT standard 2Q, then they would have been safe for transportation and safe for use in a kitchen." (Ex. 2, Hendrickson Rep. 16.) In his deposition, however, he conceded that PAM, as designed, *does* comply with the DOT 2Q standard. (Ex. 1, Hendrickson Dep. 239:14-240:13; 241:8-242:11.).

Q ... And you note that for the 2Q can under that regulation -- here, let me find it. That the metal container must be capable of withstanding without bursting a pressure of at least one and one-half times the equilibrium pressure of the contents, and that's at 130 degrees Fahrenheit?

A Right.

. . .

Q Right. So basically there's data here that shows -- to the extent that the pressure is 120 [at 130°F], one and a half times that would be 180?

A Right.

(*Id.* at 239:14-240:13.)

Q Okay. And but I think one of your opinions is that -- that if the can releases its contents at 180 psi, then it doesn't meet the definition of a 2Q can. Didn't you have that opinion at one point?

A Well, but if it bursts at 180, it meets – it meets the definition because it burst. One and a half times 120 is, as we said, 180.

Q Okay.

A So -- so if it does, it meets the -- meets the qualifications for a 2Q can, and it burst where it - at 180.

(*Id.* at 241:8-242:11.) Accordingly, Dr. Hendrickson has no remaining opinions that go to the design of the can, given that he now realizes it complied with the DOT 2Q standard after all.

C. Warning Defect Opinion

Dr. Hendrickson also takes issue with the product's warning. His Opinion 22 is that the warning label "does not meet the requirements of ANSI Z535.4" and "therefore contains a warnings defect." (Ex. 2, Henderson Rep. 16.)

IV. DIRECT MEASUREMENTS OF THE SUBJECT CAN AFTER DR. HENDRICKSON ISSUED HIS OPINIONS

Over Plaintiff's objections, the Court granted Conagra's motion to conduct destructive testing to evaluate Dr. Hendrickson's manufacturing defect theory relating to his computer model finite element analysis. (Doc. 75, December 10, 2020 Text Order.) As such, an independent laboratory took approximately 17 measurements of the thickness of the metal in the flat center disc region of the bottom of the Subject Can. (Ex. 6, Easley Rep. 16.) As explained by Conagra's expert, Dr. Sarah Easley, "The objective of the thickness survey was to assess the nominal thickness of

the manufactured condition of the steel sheet comprising the can bottom. Therefore, the primary region of interest was the flat center disc, because this region is least likely to be influenced by factors associated with manufacturing the can bottom and eversion that may slightly alter the original condition of the steel sheet from which the can bottoms were manufactured." (Id. at 11.) The average measurement was 0.0141 inches (with the minimum measurement of 0.0140 and maximum measurement of 0.0141 inches), which showed that the can's bottom was within the tightly controlled tolerance for the steel used to manufacture the can bottoms (.0138 inches ± 0.0003). (Id. at 16.) Plaintiff's expert Dr. Eagar, the only of Plaintiff's experts to issue an opinion after the testing, acknowledged that the thickness measurements support that the Subject Can was made with steel that was within specification. (Ex. 7, March 3, 2021 Rebuttal Report of Thomas Eagar ("Eagar Rebuttal Rep.") 11 (acknowledging that the containers "met the design specifications" but saying that "this is not the issue in question.").) Dr. Hendrickson also agreed in his deposition that the direct measurements prove that the steel was within specification before the can bottom was formed. (See Ex. 1, Hendrickson Dep. 70:8-14.) Dr. Easley, who analyzed the results of the destructive testing, opined in her report that the Subject Can was made as designed. (Ex. 6, Easley Rep. 19 ("Based on the results of the laboratory testing of the subject can, it is my opinion that the subject can was manufactured with bottom steel thickness and strength conforming to the design specifications that were established to control a minimum design buckling pressure of 180 psig.").)

ARGUMENT

I. LEGAL STANDARD

Under the Federal Rules of Evidence, a trial court functions as a "gatekeeper" that reviews the reliability and relevance of an expert's technical, specialized knowledge. *See Restivo v.*

Hessemann, 846 F.3d 547, 575–76 (2d Cir. 2017). Federal Rule of Evidence 702 governs the admissibility of expert testimony and provides:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702.

"As a threshold matter, trial courts must consider whether the witness is qualified by knowledge, skill, experience, training, or education to render his or her opinions as an expert, before reaching an analysis of the testimony itself." *Vale v. United States of Am.*, 673 F. App'x 114, 116 (2d Cir. 2016); *Zaremba v. Gen. Motors Corp.*, 360 F.3d 355, 360 (2d Cir. 2004) (noting district court's *Daubert* analysis was "almost superfluous" given expert's "meager qualifications"). As the Supreme Court noted in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, permitting experts to offer opinions "that are not based on firsthand knowledge or observation . . . is premised on an assumption that the expert's opinion *will have a reliable basis in the knowledge and experience of his discipline.*" 509 U.S. 579, 592 (1993) (emphasis added).

It is not enough, of course, that an expert be qualified to give the opinions offered. From there, the Supreme Court's prescribed analysis moves in two parts. First, the trial court is to assess "whether the reasoning or methodology underlying the testimony is scientifically valid." *Id.* at 592-93. If so, the second step is to determine "whether that reasoning or methodology properly can be applied to the facts in issue." *Id.* Put differently, Rule 702 requires the trial court to "determine whether an expert's testimony is "relevant to the task at hand," namely, whether the

expert's reasoning or methodology can be properly applied to the facts before the court." *Koppell* v. New York State Bd. of Elections, 97 F. Supp. 2d 477, 480 (S.D.N.Y. 2000).

Because an expert's testimony must rest on a reliable foundation, opinions should be excluded if premised on "subjective belief or unsupported speculation." *Daubert*, 509 U.S. at 590. Indeed, as the Supreme Court has made clear, "nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *General Electric v. Joiner*, 522 U.S. 136, 146 (1997).

In addition, the Court is required to screen an expert's testimony for relevance, and should also weigh the probative value of that testimony against the risk that it will waste time, create confusion, or mislead the jury. *Daubert*, 509 U.S. at 594-95; Fed. R. Evid. 403. The admissibility of expert testimony must be established by a preponderance of the evidence, *see Daubert*, 509 U.S. at 592 n.10, and "[t]he proponent of the expert testimony bears the burden of establishing the admissibility of such testimony under the *Daubert* framework by a preponderance of the evidence standard." *Hilaire v. DeWalt Indus. Tool Co.*, 54 F. Supp. 3d 223, 243 (E.D.N.Y. 2014).

II. DR. HENDRICKSON'S MANUFACTURING DEFECT OPINIONS SHOULD BE EXCLUDED.

Dr. Hendrickson does not base his manufacturing-defect opinion on any reliable methodology. At best, he offers two hypotheticals (and related explanations) for how a can with one of these hypothetical manufacturing defects, neither of which are supported by the evidence in this case, could buckle and vent below its minimum designed pressure specification.

A. Thinness of Steel Used to Form Can Bottom

As noted above, Dr. Hendrickson's theory of manufacturing defect based on the potential for "a small variation in thickness" of "the metal from which the bottom is manufactured" (Ex. 2, Hendrickson Rep. 10) was disproven by the destructive testing. As he admits, the destructive

testing establishes that the can bottom of the Subject Can was made from steel that was within specification. (*See* Ex. 1, Hendrickson Dep. 70:8-14.) Because Dr. Hendrickson's conclusions are directly contradicted by the evidence in this case, "*Daubert* and Rule 702 mandate the exclusion of that unreliable opinion testimony." *Amorgianos v. National R.R. Passenger Corp.*, 303 F.3d 256, 266 (2nd Cir. 2002). Expert testimony should be excluded if it is "speculative or conjectural." *Boucher v. U.S. Suzuki Motor Corp.*, 73 F.3d 18, 22 (2d Cir. 1996); *see also Schmidt v. Conagra Foods, Inc.*, No. 3:14-CV-1816 (SRU), 2020 WL 7027445, at *7 (D. Conn. Nov. 30, 2020) (recognizing destructive testing in another case involving the same product, and Dr. Hendrickson's same FEA, disproved the theory he had proposed: "Those results contrast with Dr. Hendrickson's FEA analysis findings that rely in part on a reduced thickness of the subject can's bottom.").)

B. Thinning of the Can Bottom During Can Formation

Dr. Hendrickson's other hypothesis that there are areas of the can's bottom that are thinned during the can-making process, and therefore are "less than that specified" for the material used to make the can bottom (Ex. 2, Hendrickson Rep. 10), does not support a manufacturing defect. This thinning occurs in *all* cans manufactured by DSC. (Ex. 1, Hendrickson Dep. 70:15-24.) Indeed, Dr. Hendrickson acknowledged that he does not "know whether thinness is varied from can to can." (Ex. 1, Hendrickson Dep. 76:2-6.) He also did not analyze the Subject Can's measurement data in any supplemental report, or in his deposition (*id.* at 101:13-25), nor did he attempt to explain how any alleged thinness in the Subject Can would result in buckling and venting at so far below the pressure specification (*id.* at 82:7-23; 102:7-11). Dr. Hendrickson also agreed that there could have been areas of thinness on the exemplar can thinner than the thinnest measurement on the Subject Can. (*Id.* at 83:12-21.)

As recognized by the court in *Schmidt*:

[T]he local disparities observed in the direct measurements of the subject can do not establish a manufacturing defect because similar variations were observed in the unvented exemplar can. . . . The Plaintiffs have not explained how the local variations of thickness in the subject can were due to a manufacturing defect or how those variations caused their injuries.

Schmidt v, 2020 WL 7027445, at *8.

To the extent Dr. Hendrickson tried to recast this FEA during his deposition to also apply to the thickness of certain places on the can bottom *after* formation, such testimony is untimely, and unreliable. Since *every can* is thinned during can formation, it would mean that *every can* would buckle at pressures under its design pressure of 180 PSI, which is contradicted by the manufacturing records produced in the case.

Q Well, your own finite element analysis shows that if the can is within spec, the pressure is gonna be 186 psi, right?

MR. SERBY: Objection to form.

THE WITNESS: It was set up to do that. It was set up so that there's no question that if the thickness and -- and the hardness are proper, then the model predicts the pressure will be 180 or higher to buckle. If it didn't do that, the whole -- the analysis would be -- would be incorrect and invalid.

(Ex. 1, Hendrickson Dep. 95:23-96:7.)

Q Okay. So I guess maybe we are not clear. But if every exemplar can has an area of thinness outside the central disc, then wouldn't every PAM can vent lower than 186 psi?

MR. SERBY: Objection to form.

THE WITNESS: Probably.

(*Id.* at 98:17-22.) As reflected in the manufacturing records produced in this case, all 16 containers tested by DSC from the lot in which the Subject Can was made (using the same can-forming process) buckled at a minimum pressure of 180 PSI. (Ex. 9, Eagar Rep. App. B. at 32.)

Furthermore, even if the lowest thickness measurement taken on a single point on the Subject Can bottom (0.0129 inch) is inputted into Dr. Hendrickson's FEA (which would not be appropriate because his FEA is based upon the uniform thickness of the steel before the can was formed), and rounded to the even thinner measurement of 0.0120, the lowest theoretical (yet completely implausible in the real world)² pressure arguably predicted by Dr. Hendrickson's FEA is 112 PSI (Ex. 5, Table containing FEA data), which correlates to a temperature of approximately 110°F, or higher, based on the pressure-temperature data for the contents (Ex. 10, Pressure-Temperature Table).) Accordingly, Dr. Hendrickson's FEA – which does not go lower than 112 PSI even under implausible assumptions – does not predict any hypothetical can venting at a temperature-pressure as low as the Subject Can is alleged to have vented in this case. (Ex. 1, Hendrickson Dep. 208:1-2 ("kitchens typically would reach – reach 90 degrees . . . seldom would a kitchen get to be a hundred"); 106:18-107:6 (admitting, "I really don't know" if the FEA predicts any scenarios where the Subject Can would vent under Plaintiff's allegation); Ex. 7, Dee Rep. 14 ("In the absence of a heat source, a can located on a kitchen counter is expected to have a temperature approximately equal to the ambient temperature of the kitchen.").)

Furthermore, neither of Dr. Hendrickson's theories explain how a PAM container could buckle and vent at the time of the incident, without exposure to any heat, after otherwise surviving

² To reach a pressure of 112 PSI in Dr. Hendrickson's FEA, you would need to assume that the entire can bottom is thinner than any measurement taken on the Subject Can, *and* that it was made using steel that was substantially weaker than required, which Dr. Hendrickson previously admitted would be "very unlikely" in the real world. (Ex. 8, October 24, 2018 Deposition of Lester Hendrickson 198:1-21 (steel less than 55 KSI would be "very unlikely") taken in the matter of *Schmidt v. Conagra Foods, Inc.*, No. 3:14-CV-1816 (SRU) (D. Conn.).) Dr. Hendrickson further testified that as metal is stretched, it becomes stronger. (Ex. 1, Hendrickson Dep. 87:7-25.) Having both a substantially too thin and a substantially too weak metal in the same measurement, therefore, is incompatible with that view. Further, Dr. Hendrickson's own interpretation is that 125 PSI is "pretty close to the lowest [pressure predicted by his FEA]. . . anything lower than that, a pressure lower than that would be somewhat unlikely." (*Id.* at 205:16-206:3.)

months of up to twice-daily use without incident. For this additional reason, Dr. Hendrickson's theory does not fit the facts of the case, and is therefore, not reliable. *See Astra Aktiebolag v. Andrx Pharms.*, *Inc.*, 222 F. Supp. 2d 423, 488 (S.D.N.Y. 2002) ("[E]ven if the methodology used by the expert is considered to be reliable, the expert's testimony will nevertheless fail to meet the 'fit' requirement and should be excluded if the data relied upon by the expert is materially different from the data relevant to the facts of the case."), *aff'd sub nom. In re Omeprazole Pat. Litig.*, 84 F. App'x 76 (Fed. Cir. 2003).

Dr. Hendrickson's theory, therefore, cannot explain the incident. Because Dr. Hendrickson's conclusions are directly contradicted by the evidence in this case, "*Daubert* and Rule 702 mandate the exclusion of that unreliable opinion testimony." *Amorgianos*, 303 F.3d at 266.

III. DR. HENDRICKSON'S DESIGN DEFECT OPINIONS SHOULD BE EXCLUDED.

As noted above, Dr. Hendrickson's opinion is that "absent a manufacturing defect" the Subject Can "would have safely retained the explosive contents." (Ex. 2, Hendrickson Rep. 14.) Accordingly, none of Dr. Hendrickson's opinions regarding the design actually contend that the design directly caused Plaintiff's injuries. Instead, all of Dr. Hendrickson's design-related opinions are in the realm of offering proposed "safer" designs, either by way of having a different aerosol can with a purported larger margin of safety, or by having a different propellant in the PAM container.

In *Daubert* and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999), the Supreme Court identified a non-exhaustive list of specific factors the court may consider when evaluating the reliability of expert's opinion, including "(1) whether a theory or technique can be and has been tested; (2) whether it has been subjected to peer review and publication; (3) whether it has a

high known or potential rate of error; and (4) whether it is generally accepted in the relevant scientific community." *Kumbo Tire*, 526 U.S. at 149–50 (citing *Daubert*). In *Zaremba*, the Second Circuit applied those factors to the admissibility of an expert's testimony regarding a safer alternative design, and concluded that the proffered expert satisfied none of the four factors, in that (1) he "has not tested his design; (2) he has not subjected it to peer review or publication; (3) his design does not have a 'known rate of error,' since it has not been tested; and (4) [he] has not shown general acceptance either of his design or of his methodology." 360 F.3d at 358. The Second Circuit recognized that "[n]umerous courts have excluded expert testimony regarding a safer alternative design where the expert failed to create drawings or models or administer tests," *id*. (citing cases), and that the court itself had "upheld the exclusion of an expert who, among other 'shortcomings,' 'never attempted to . . . test his theory' of a safer [alternative] . . . design." *Id*. at 359.

Here, Dr. Hendrickson's opinions that the product would be "safer" if it used a different container or different propellant are conclusory statements with *no* supporting facts, analysis, or testing. Dr. Hendrickson employed none of the above-referenced *Daubert* factors, nor did he analyze or compare the utility and cost of the product's existing design (which is safe) with his vaguely proposed alternative designs. Because Dr. Hendrickson does not support his opinions on alternative design with any facts or analysis, they should be excluded.

But more fundamentally, these opinions should be excluded because – based on Dr. Hendrickson's own admissions – they are irrelevant to this case. Indeed, Dr. Hendrickson's design-defect opinions in this case are virtually identical to the design-defect opinions that were excluded in *Urena*, a case that involved the exact same product and similar issue regarding the assumed

facts. *Urena*, 2020 WL 3051558, at *10 ("Court grants Defendants' motion to exclude Dr. Hendrickson's report and testimony pursuant to *Daubert*"). As recognized by the court in *Urena*:

Thus, by Dr. Hendrickson's own admission, his proposed alternative design of using the DOT 2Q can without "U"-shaped vents, on its own, would have made no actual difference with respect to the accident at issue here and therefore cannot be found to be a safer alternative. *See Zaremba*, 360 F.3d at 359 ("[T]o provide relevant testimony, [the expert] must also establish that his hypothetical design would have resulted in greater safety in the [] accident at issue."); *Florentino v. Am. Lifts and REM Sys., Inc.*, No. 06-CV-3553 (BMC) (MDG), 2008 WL 11417177, at *6 (E.D.N.Y. Apr. 15, 2008) ("[F]or expert testimony on design defect to be relevant, not only must it offer [a] feasible alternative design, but the expert must also establish that his hypothetical design would have resulted in greater safety in the accident at issue." (internal quotation marks, citation, and alterations omitted)).

Id. Because Dr. Hendrickson admits that, "absent a manufacturing defect . . . the subject PAM can in . . . would have safely retained their explosive contents" (Ex. 2, Hendrickson Rep. 14), Dr. Hendrickson's various opinions as to "safer" designs or the "utility" of the existing design are unrelated to the case and irrelevant – the *design* is not what he alleges caused the accident.

The *Urena* court also specifically excluded Dr. Hendrickson's opinions about "margin of safety":

Moreover, to the extent Dr. Hendrickson bases his design-defect opinion on the purported absence of any "margin for safety" with respect to the thickness of the can's bottom (see Hendrickson Rep., Dkt. 87-1, at ECF 30), the Court notes that he has not identified an existing can in the marketplace that meets those criteria, nor has he tested or designed one. That proposal does not pass muster under *Daubert*. *Cf. Zsa Zsa Jewels, Inc.*, 419 F. Supp. 3d 514–16.

Urena, 2020 WL 3051558, at *9 n.10. And it specifically excluded his opinions to the extent they related to DOT regulations:

Defendants also argue that Dr. Hendrickson's conclusions concerning whether the PAM canister meets the DOT regulations are irrelevant and unsupported by evidence. . . .The Court agrees with Defendants that such testimony is irrelevant. At his deposition, Dr. Hendrickson explained that "[t]he intention of those [DOT] standards is to create a safe condition for shipping the can. [They have] absolutely nothing to do with consumer protection or consumer safety[;] ... the DOT standards

have nothing to do with venting." (Hendrickson Dep., Dkt. 87-2, at 108:24–109:11.) Plaintiffs simply do not put forth any evidence or theory that connects the DOT standards to any issues in this case. Even if Dr. Hendrickson's testimony would be admissible under *Daubert*, his conclusions with respect to the DOT regulations are irrelevant to this case and are therefore inadmissible under Federal Rule of Evidence 401.

Urena, 2020 WL 3051558, at *10 n. 11.

As related to Dr. Hendrickson's opinion on the use of an alternative "safer" propellant, the *Urena* court also excluded those opinions:

Dr. Hendrickson also opines that the PAM product was defectively designed because it uses a flammable propellant However, Dr. Hendrickson does not actually propose a safer propellant, nor has he tested any. "The touchstone of an expert's report should be a comparison of the utility and cost of the product's design and alternative designs." Zsa Zsa Jewels, Inc. v. BMW of N. Am., LLC, 419 F. Supp. 3d 490, 509 (E.D.N.Y. 2019). Dr. Hendrickson did not do any such comparison; his suggestion is purely speculative. Moreover, Dr. Hendrickson's proposal has not been subjected to peer review or publication, the design does not have a "known rate of error" since it has not been tested, and he fails to show general acceptance of either his design or of his methodology. See Zaremba, 360 F.3d at 358–59; see also Lara v. Delta Int'l Mach. Corp., 174 F. Supp. 3d 719, 736 (E.D.N.Y. 2016) (collecting cases for proposition that a "utility versus cost comparison should entail the testing of any proposed alternative design" when analyzing a proposed alternative design and concluding that "[w]ithout properly testing his alternative theory, [the expert]'s conclusions are bottomed upon nothing more than mere speculation and guesswork, which are a less than adequate basis to support [the expert]'s position—especially since performing detailed studies and tests represents the touchstone of what an engineering expert in a design defect case should do" (internal quotation marks and citations omitted)); Pierre v. Hilton Rose Hall Resort & Spa, No. 14-CV-3790 (VMS), 2016 WL 1228604, at *3 (E.D.N.Y. Mar. 28, 2016) (collecting cases for proposition that testing, although not a prerequisite for the admissibility of expert testimony, is "critical" in design defect cases). Thus, Dr. Hendrickson's proposed alternative design does not meet the standard for admissibility.

Id. at *10. Dr. Hendrickson also conceded at his deposition that cooking spray formulations are not his specialty, and he is not qualified to offer such opinions. (*See* Ex. 1, Hendrickson Dep.

142:8-17 ("That's not my area of specialty."); 140:16-25 ("I'm not the expert in formulating those, no.").)

In the end, Dr. Hendrickson's design-related opinions in this case are virtually identical to the opinions excluded in *Urena*, and should be excluded in this case for the same reasons.

IV. DR. HENDRICKSON'S "WARNING DEFECT" OPINION IS INADMISSIBLE.

Dr. Hendrickson is not qualified to testify about the warnings on PAM Original cooking spray, nor is his opinion supported by any reliable methodology. (Ex. 2, Hendrickson Rep. 16.) "[B]ecause a witness qualifies as an expert with respect to certain matters or areas of knowledge, it by no means follows that he or she is qualified to express expert opinions as to other fields." Nimely v. City of New York, 414 F.3d 381, 399 n.13 (2d Cir. 2005). "To determine whether a witness qualifies as an expert, courts compare the area in which the witness has superior knowledge, education, experience, or skill with the subject matter of the proffered testimony." United States v. Tin Yat Chin, 371 F.3d 31, 40 (2d Cir. 2004). Dr. Hendrickson admits that he has no education or experience relating to product warnings, other than reviewing reports from other experts in other litigation in which he was not the warnings expert:

- Q Okay. And what -- what educational background do you bring to bear regarding the adequacy of the warning?
- A It's mainly my experience of what -- how many years now doing product safety work. I've been in -- I've worked with a lot of warnings experts, and I've -- I've done a lot of research myself on reading the standards, the regulations that deal with warnings, and I've read a lot of warnings. So I don't have any formal training in -- in warnings or human factors, but I've got a lot of practical experience. So I -- I know -- I know I've been involved in cases where warnings were considered to be proper and other cases where warnings were not considered to be proper.
- Q And have you been the person to offer expert opinions about the adequacy of the warning in any case?
- A I've offered opinions and -- but I am not sure that -- that they were the -- accepted by the court as being authoritative. I mean, there are people who specialize

in warnings, and -- and a lot of those experts are involved in cases that I've been

involved in.

Q And you don't specialize in warnings, right?

A I'm not -- I'm not a warning specialist, but I do have a lot of experience in -- in

warnings.

(Ex. 1, Hendrickson Dep. 196:22-197:19.) Furthermore, Dr. Hendrickson also conceded that the

only source for his opinion was an ANSI standard (id. at 200:7-24), which he admitted is a

voluntary standard for which he can identify no other cooking spray product that conforms (id. at

199:4-22). Because Dr. Hendrickson is not qualified to opine on warnings, see Fed. R. Evid. 702,

and has not supported his opinions with any reliable methodology, his opinions should be

excluded. See Schmidt, 2020 WL 7027445, at *27 (excluding an actual warning expert's opinion

that the PAM warnings were defective on the basis that the only "support" was to point to the same

voluntary ANSI standard).

CONCLUSION

For the foregoing reasons, Conagra respectfully requests that the Court grant its motion to

exclude the testimony of Dr. Lester Hendrickson.

Respectfully submitted,

Dated: August 20, 2021

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CERTIFICATE OF SERVICE

I hereby certify that on August 20, 2021, I caused the foregoing document to be served via electronic mail upon the following counsel of record:

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